ture and 40 feet focal length, in accordance with the Schæberle method, and likewise with a camera 6 feet in focal length. It is proposed that some or all of the coronal photographs shall be utilized in a photometric study of the brightness of the corona.

The spectrum of the corona, as to its general features, as to the accurate wave-lengths of some of its bright lines, and as to the distribution of several of its gaseous constituents, will be the subject of Dr. Moore's observations, with three spectrographs.

The Adelaide Observatory, in charge of Director Dodwell, will be equipped in part with a camera having a quadruplet lens loaned by the Allegheny Observatory for application to the Einstein problem, and further with a camera 40 feet in focal length, loaned by the University of California for the photography of the corona. The interval of time between mid-totality at Wallal and mid-totality at Cordillo Downs will be 35 minutes, and it is hoped that photographs of the corona secured at the two stations with instruments nearly identical may be valuable in a study of changes occurring in the coronal structure during this interval.

Dr. Cooke plans to apply the Sydney astrographic telescope to the Einstein problem at Gooniwindi.

Plans and instrumental equipment other than those described above are at present unknown.

W. W. CAMPBELL.

CORRECTIONS TO THE RIGHT ASCENSION OF THE MOON

The following corrections to the right ascension of the Moon, as tabulated in the *American Ephemeris,* have been observed with the meridian circle:

February 13, 1922	$+0^s.93$	Fol. Limb
March 7, 1922	+1.36	Prec. Limb
March 8, 1922	+1.36	Prec. Limb
March 13, 1922	+0.97	Fol. Limb

On March 8 the third magnitude star λ *Geminorum* was observed in the same field with the Moon. The star preceded the limb of the Moon by 30 seconds and was 4′ south of the center of the Moon. There was an interval of five seconds between the last transit thread of the star and the first transit thread of the Moon. The star was occulted earlier in the night.

The right ascensions of the stars in the *American Ephemeris* were adopted for these observations.

There are undoubtedly relatively large systematic errors in the observations of the transits of the limbs of the Moon. The results of every observer exhibit these errors, and no two observers are likely to have the same errors. In general the transits of the preceding limb give larger plus corrections to the tabulated right ascensions. The accidental errors are larger also than those made in observing the transit of a star, in my own case from two to four times as large.

Adopting the mean of the corrections recently observed here, $+ 1^s.15$, the coming eclipse of the Sun next September should occur half a minute earlier than the time as computed from the tabulated right ascensions of the Moon. The *American Ephemeris* includes provisional corrections to the tabular positions, which partially account for this difference.

Of the three methods used in determining corrections to the position, as computed from the gravitational theory, occultations appear to give the smallest corrections, eclipses give the largest, and meridian circle transits give intermediate values.

March 16, 1922. R. H. TUCKER.

ON THE SECULAR CHANGE IN THE PROPER-MOTION OF BARNARD'S STAR

It was suggested by Bessel[1] that stars of rapid apparent motion might show an appreciable secular change in the total proper-motion. Schlesinger[2] derived a formula which connects the secular change of proper-motion with the product of parallax and radial velocity. Adopting the radial velocity at 100 km. per sec. and the parallax at $0''.5$, he calculated a progressive increase in the motion of $0''.0005$ per year. With the object in view of evaluating the variation with the greatest possible accuracy, all

[1] *A. N.*, **22**, 145, 1844.
[2] *A. J.*, **30**, 137, 1917.
[3] *M. N.*, **77**, 42, 1916.